

cover plates and gaskets resistant to the attack of phosphorus pentoxide.

(j) All enclosed compartments containing cargo tanks shall be provided with effective means of ventilation.

(k) Cargo lines shall be traced with steam piping and secured thereto by lagging to prevent solidification of cargo during transfer operations.

(l) During cargo transfer, a water hose shall be connected to a water supply ready for immediate use, and any spillage of phosphorus shall be immediately washed down. This requirement can be met by facilities provided from shore.

(m) At least two fresh air masks or self-contained breathing apparatus shall be stowed on board the vessel at all times for use of personnel entering the tanks or adjacent spaces.

(n) Authorization from the Commandant (G-MSO) shall be obtained to transport lading other than phosphorus in the cargo tanks or to have on board any other cargo when phosphorus is laden in the tanks.

(o) Mechanical ventilation of sufficient capacity to insure a change of air within the cargo tanks every 3 minutes shall be provided during the inspection and maintenance of the cargo tanks.

(p) Cargo tanks shall be electrically bonded to the hull of the barge. A vessel shall be electrically bonded to the shore piping prior to connecting the cargo hose. This electrical bonding shall be maintained until after the cargo hose has been disconnected.

[CGFR 70-10, 35 FR 3714, Feb. 24, 1970, as amended by CGD 82-063b, 48 FR 4781, Feb. 3, 1983]

#### § 151.50-55 Sulfur (molten).

(a) Ventilation (cargo tank):

(1) Cargo tank ventilation shall be provided to maintain the concentration of H<sub>2</sub>S below one-half of its lower explosive limit throughout the cargo tank vapor space for all conditions of carriage; i.e., below 1.85 percent by volume.

(2) Where mechanical ventilation systems are used for maintaining low gas concentrations in cargo tanks, an alarm system shall be provided to give warning if the system fails.

(3) Connections shall be provided to enable sampling of the atmosphere

over the cargo in each cargo tank for analysis.

(4) The ventilation system shall be designed and arranged to preclude the depositing of sulfur within the system.

(b) Void spaces:

(1) Openings to void spaces adjacent to cargo tanks shall be designed and fitted to prevent the entry of water, sulfur or cargo vapors.

(2) Connections shall be provided to enable sampling and analyzing vapors in void spaces.

(c) Temperature controls shall be provided in accordance with § 151.20-10 and applicable sections of Subpart 151.40 of this part. Heat transfer media shall be steam, and alternate media will require specific approval of the Commandant.

[CGFR 70-10, 35 FR 3714, Feb. 25, 1970]

#### § 151.50-60 Benzene.

The person in charge of a Coast Guard inspected barge must ensure that the provisions of part 197, subpart C, of this chapter are applied.

[CGD 88-040, 56 FR 65006, Dec. 13, 1991]

#### § 151.50-70 Cargoes requiring inhibition or stabilization.

When table 151.05 refers to this section, that cargo must be—

(a) Inhibited; or

(b) Stabilized.

[CGD 88-100, 54 FR 40040, Sept. 29, 1989]

#### § 151.50-73 Chemical protective clothing.

When table 151.05 refers to this section, the following apply:

(a) The person in charge of cargo handling operations shall ensure that the following chemical protective clothing constructed of materials resistant to permeation by the cargo being handled is worn by all personnel engaged in an operation listed in paragraph (b) of this section:

(1) Splash protective eyewear.

(2) Long-sleeved gloves.

(3) Boots or shoe covers.

(4) Coveralls or lab aprons.

NOTE: "Guidelines for the Selection of Chemical Protective Clothing", Third Edition, 1987, available from the American Conference of Governmental Industrial Hygienists, 6500 Glenway Ave., Cincinnati, OH 45211-